

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1-13 were pending. Claims 1-13 were rejected. In this response, claims 1 and 8 have been canceled without prejudice. Claims 2, 6, 9, and 13 have been amended. In addition, new claims 14-17 have been added. Thus, claims 2-7 and 9-17 remain pending. No new matter has been added.

Claims 1-2, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,559,612 of Darcie et al. (“Darcie”). Claims 3-4 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darcie. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darcie in view of U.S. Patent No. 6,317,234 of Quayle (“Quayle”). Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darcie in view of Quayle and U.S. Patent No. 6,639,931 of Dowd (“Dowd”).

It is respectfully submitted that claims 2-7 and 9-17 as amended include limitations that are not disclosed by the cited references, individually or in combination. Specifically, independent claim 2 recites as follows:

2. A method comprising:

establishing a plurality of transmission time slots, each time slot corresponding to one of a plurality of optical transmitters coupled to a head end via a passive optical network (PON) splitter;

forming a bit interleaved optical data stream at the PON splitter based on a plurality of optical bits transmitted by the plurality of optical transmitters during a respective time slot associated with each of the optical transmitters; and

transmitting the bit interleaved optical data stream from the PON splitter to the head end over an optical network. (as amended)

Independent claim 2 includes establishing multiple transmission time slots for each of the local optical transmitters, forming a bit interleaved optical stream at a PON splitter coupled to the optical transmitters, where each of the bits is transmitted within the respective time slot

associated with each transmitter, and transmitting the bit interleaved optical data stream from the PON splitter to the head end. It is respectfully submitted that the above limitations are not disclosed by Darcie.

Rather, Darcie discloses transmitting TDM signals within multiple time slots, where each time slot is used to transmit a “packet” of information to the respective ONU (see, col. 4, lines 54 to 60 of Darcie). Although Darcie indicates that bit interleaving techniques may be used, however, it is respectfully submitted that Darcie fails to provide sufficient detailed information to enable one with ordinary skill in the art, based on the teachings of Darcie, to implement such techniques.

In addition, Darcie also fails to disclose a passive optical network (PON) splitter to generate a bit interleaved optical data stream using multiple bits transmitted from multiple transmitters during the respective time slots and to transmit the bit interleaved optical data stream to a head end over an optical network. The Examiner contends that U.S. Patent No. 6,317,234 of Quayle (“Quayle”) discloses a PON splitter. However, there is no suggestion within Darcie and Quayle to combine these two references. Specifically, there is no suggestion within Quayle and/or Darcie to use the PON splitter to generate a bit interleaved optical data stream using multiple bits transmitted from multiple transmitters during the respective time slots and to transmit the bit interleaved optical data stream to a head end over an optical network. Even if Quayle and Darcie were combined, such a combination still lacks the limitations set forth above.

Further, with respect to Dowd, although Dowd discloses a vertical cavity surface emitting laser (VCSEL), there is no suggestion within Dowd to use a VCSEL to transmit an optical bit within a time slot to a PON splitter, where a bit interleaved optical stream is generated and transmitted to a head end. It is respectfully submitted that there is no suggestion to combine Dowd with Darcie and Quayle because it lacks a reasonable expectation of success.

Therefore, for the reasons discussed above, independent claim 2 is not anticipated by Darcie and is patentable over Darcie in view of Quayle and Dowd.

Similarly, independent claims 6, 9, and 13 include limitations similar to those recited in claim 2. Thus, for the reasons similar to those discussed above, independent claims 6, 9, and 13 are not anticipated by Darcie and are patentable over Darcie in view of Quayle and Dowd.

Given that dependent claims 3-7, 10-12, and 14-17 depend from one of the above independent claims, at least for the reasons similar to those discussed above, it is respectfully submitted that claims 3-7, 10-12, and 14-17 are not anticipated by Darcie and are patentable over Darcie in view of Quayle and Dowd.

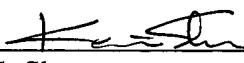
In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

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Date: 3/19/2004



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